DOCUMENT RESUME

ED 337 531 UD 028 290

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TITLE Evaluation of Chapter I Take-Home Computer Program. Report No. 7, Vol. 25.
INSTITUTION Atlanta Public Schools, GA. Dept. of Research and Evaluation.
PUB DATE Mar 91
NOTE 53p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Achievement; Comparative Analysis; Compensatory Education; *Computer Assisted Instruction; *Computer Literacy; Elementary Education; Elementary Schools; *Homework; Middle Schools; *Parent Participation; Parents; Program Evaluation; Questionnaires; Urban Schools
IDENTIFIERS Atlanta Public Schools GA; Education Consolidation Improvement Act Chapter 1

ABSTRACT

The Chapter I Take-Home Computer (THC) program was established in nine elementary and eight middle schools in Atlanta (Georgia) in the 1989-90 school year. One hundred and eighty computers were sent home with 422 students, whose parents were willing to work with the students, for 6-week periods. Log sheets were kept by each child regarding the homework assignments made by his or her teacher. A questionnaire was sent to the participating students' parents to obtain information about observed differences in the child's learning. Parental responses are reported for 174 parents (representing 35% of the participating students). Student achievement is examined using results on the Iowa Tests of Basic Skills reading and mathematics tests. Multivariate analysis of covariance does not reveal any significant statistical difference between the 307 control group members and experimental group members overall, although a significant improvement for middle-school students in mathematics is evidenced. The following suggestions are made: (1) if the goal is exposure to computers, 6 weeks is not enough time; and (2) if the goal is increased learning by students, the time the computer is in the home must be increased. Statistical data are presented in seven tables. The THC curriculum outline and evaluation questions and selected parental responses to evaluation questions 3 and 4 are appended. (SLD)

Evaluation of Chapter I Take-Home Computer Program

Department of Research and Evaluation
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Report No. 7, Vol. 25, 12/90, Revised 3/91

Evaluation of Chapter I
Take-Home Computer Program

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December 1990

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Abstract

The Chapter I Take-Home Computer (THC) program was established in nine elementary schools and eight middle schools in academic year 1989-1990. One hundred eighty computers were sent home with students for six week periods, but computers went to only those students whose parents were willing to come to a meeting and agree to work with the child. Log sheets were kept by the child regarding the homework assignments made by the teacher. A questionnaire was sent to parents in order to obtain information about observed differences in learning by the child. The questionnaire included a section for open-ended comments.

The students' achievement was measured by the Iowa Tests of Basic Skills (ITBS) reading and mathematics scores. A multivariate analysis of covariance test was applied to the data with the 1989 ITBS reading and math scores as the covariates. No significant statistical difference was observed between the control and experimental students. The first analysis was of pooled data from elementary and middle school students and was nonsignificant. For the second analysis, scores of elementary and middle school students were separated. A separate analysis was performed for elementary and middle school students. When elementary - middle school gains were compared for math and reading with an analysis of covariance, there was a significant difference in the gain for middle school students in mathematics, but not in reading. There were no significant differences in scores for elementary students. If the goal is exposure, six weeks is enough time, if the goal is increased learning by students, the time for the computer to be in the home needs to be increased.

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Overview

In 1989-90 one hundred eighty Apple IIe Take-Home computers were offered to students in Chapter I classes in nine schools during first semester and eight schools second semester for a six-week period.

The computers were sent home only to students whose parents came to a meeting and signed an agreement form indicating they understood the responsibilities they were assuming in regard to the computer. Parents also agreed to work with the students each Monday - Thursday evening for twenty minutes.

The purpose and emphasis for the Take-Home Computer (THC) Program was to increase reading and mathematics achievement in Chapter I Take-Home computer students and to increase parental involvement for Chapter I Take-Home Computer students.

The evaluation of the THC consisted of several different aspects of the program, tied to the stated objectives of the program.

For a comparison of time spent on the computer at home, 40 student journal sheets were returned and the time compared.

In addition, parents were asked to tell on an average how long they had worked with their children on homework before the computer arrived and after the computer returned to school. The evaluation also consists of a review of comments made by the parents of the students in the Chapter I classes who took home computers. These remarks first are a response to the question, "What differences do you see in your child's learning as a result of the computer being in your home?" The second set of remarks by parents is a request for additional comments they wished to make about the program.

The final part of the evaluation of the program is a statistical comparison of the Iowa Tests of Basic Skills scores in reading and mathematics comparing Take-Home Computer students' scores with a control group of similar students. Further comparison will be made of the progress made by elementary versus middle school students.

Purpose

The first and most important purpose of the Take-Home Computer Program was to help students improve reading and math skills through computer-assisted study and practice at home. Education should be an all-encompassing process; it need not be confined to the classroom or restricted to the hours that school is actually in session. The Take-Home Computer Program expanded the learning environment and encouraged parents to get involved in the educational process of their child. And because a computer was actually "checked out" from the school and taken home, the program also fostered greater skill and confidence in the use of this increasingly important educational tool. Jostens Learnings' Take-Home Computer Program was based on the belief that computer-assisted education can be effective in the home as it is in the classroom.

Program Design

Instructional

This module consisted of reading, language arts and mathematics instructional diskettes, accompanying student workbooks, all assessment materials, and necessary parent information.

Computer and workbook activities covered levelized skills in the THC continuum. The sequence in which the skills were presented could be modified to reflect the order in which they were presented in school. This feature allowed the program to provide parallel reinforcement of the same skills that youngsters were learning in the classroom. For students performing below grade level, individual skills could be targeted for remediative purposes.

Enrichment

While the instructional modules were intended for use with children enrolled in the program for reading, language arts and mathematics assistance, the enrichment component was intended to be used by the entire family. Ten diskettes provided multiple levels of games or other activities designed to engage parents and children in expanding their vocabulary, exploring famous people and places, developing logical thinking skills, strengthening problem-solving abilities and more. Five "Memorybooks" gave families other enrichment activities to pursue independently of the computer.

Management

Each APS Area Office was provided with a THC Manager (a computer, hard disk and printer) which remained at the site. Special management software kept track of all students and maintained information about their progress in the program. Assessment instruments could be scored on the system. The management system generated a number of printed reports that summarized individual and group process. The reports were especially meaningful to share with classroom teachers and parents.

Evaluation Criteria

Most of the schools using the THC Program evaluated its success by measuring achievement gains. Usually, this involved administering pre- and post-tests to acquire growth information.

Observations

Many other participating schools or school districts have conducted informal assessments of the THC Program. Most often, these took the form of parent, student questionnaires.

Method of Delivery

The administration of the program varied somewhat according to local needs and goals, but the general procedure was as follows:

> The computers were lent out to students in "rotational shifts," each group of students having use of the computers and accompanying materials for a predetermined period of time, after which the next group got its turn, and so on.
>
> Along with the computer the student received several cases of computer programs that related specifically to the skills in the THC continuum, a series of workbooks containing instructional materials on those skills and a case of enrichment (fun) programs.
>
> Tests were to be administered to students at school to identify their particular weaknesses in the skills of the THC continuum and check for improvement after their participation in the THC program. Paper/pencil tests were provided. These tests could be graded and the scores recorded on the THC Manager. The THC Manager generated a printed report detailing each student's performance of the various THC skills.

Objectives

1. To improve students' reading and math skills by reinforcing at home the learning that takes place in the classroom.
2. To give students more "time on task."
3. To provide first-hand experience for students in computer literacy, keyboarding, and word processing.
4. To involve parents in the educational process.
5. To encourage parents and students to work together toward a higher level of cooperation and communication.

Role of the Chapter I Coordinator

The Chapter I THC Coordinator, in some cases with the assistance of the educational consultant, had the following responsibilities:

1. Selecting the students who would participate in the program.
2. Compiling participating students' placement levels in reading and math.
3. Contacting the selected families and inviting them to participate in the program.
4. Setting dates and times for parent training workshops and informing all participants.
5. Planning and setting up for parent training workshops.
6. Organizing equipment and materials for distribution.
7. Conducting parent training workshops.

Technical Maintenance

A technical consultant visited the school periodically to repair inoperative hardware, provide preventive maintenance, or deliver replacements when necessary.

Components of the Program

The components of the program were described as follows in the proposal.

The Take-Home computer carrying case included the following:

- Apple Computer
- Computer Cable
- Monitor Cable
- Apple Monitor (separate)

The book bag contained these items:

- Disk Drive
- 4-5 Diskette Cases
  Each book bag will contain Case 1 and Case 2 for both reading and math skills. The yellow enrichment case which contains 10 diskettes will be issued to the participating students after five weeks into the THC program. However, they may be previewed at the THC Parent Training Workshop.

Instructional reference materials:

- Parent Guide
  Parent Guides can be used at the THC Parent Training Workshop. Copies are available if parents desire to keep one.

- Memorybooks
  A set of Memorybooks are available for each Chapter I Coordinator. Additional Memorybooks can be ordered if necessary.

- Placement Test Booklets and Answer Sheets

- Parent Training Workshop Folder and Student Workbooks
  Each folder will contain Basic Skills workbook in reading and math with accompanying answer key. Applications workbooks will be issued when the student returns his/her computer.

Location of the Computers

First semester 1989-90, the computers were placed with Chapter I students in Grove Park, Harwell Road and Hope Elementary Schools and the following middle schools -- Bunche, Kennedy, King, Long, Price and Sylvan. Two rotations of the computers in the first semester provided two groups of students opportunities to learn with the computers.

Second semester the computers were placed with Chapter I students in the following elementary schools -- Anderson Park, Bethune, Carter, Fain, Scott and Woodson, and Coan and Parks Middle Schools. Since the ITBS testing program came during the second rotation of the second semester, only those students who were involved in the program during the first rotation of second semester were evaluated.

Responses

Time Reported Working on Homework with Child

In May, 1990 questionnaires were sent to each THC student's parent asking for information and comments, and each teacher was asked to send in the students' log or journal papers. Parental responses are reported for those 174 parents who returned the questionnaire or 35 percent of the students who were in the program.

Parents of all THC students were asked in the evaluation to indicate the amount of time they spent working with their child on homework before the computer came and afterwards. Since one of the goals was to encourage parents and students to work together it was important to note the time involved before and after the impact of the computer. The seventy-one elementary school parents responding indicated before the computer they spent an average of 88.66 minutes working with their child on homework but afterward 87.39 minutes. This was an average of 1.27 minutes less.

The one hundred three middle school parents who responded indicated they spent 65.43 average minutes with their child before the computer with 45.92 minutes afterwards -- a loss of 19.51 minutes. The numbers for both sets of parents appear inflated. Some parents listed times as high as four or five hours or even two or three hours as if they were telling the researcher what they thought she wanted to hear. Specifically, they believed they should give high numbers for time spent with the students and did.

Far more realistic were the figures returned by the teachers of the 40 students' journal sheets.

Students' journal sheets (sample in Appendix A) were returned by a number of teachers (who had not destroyed them). These indicated the time spent on each daily lesson, the type of activity, the score and a rating of the performance. Twenty minutes was the expected minimum time.

The 40 returned sheets were divided into two groups -- 26 elementary students and 14 middle school students. The average time reported spent for the elementary school group was 23 minutes while the average time reported spent by middle school students was 19 minutes per day. Computing this difference on a t-test for unequal means, the difference in time is significant at the .001 level. Therefore, elementary school students spent significantly more time doing homework than middle school students.

Parent Opinions

Parents were asked to respond to two questions. Question Number 3 asked what differences they saw in their child's learning as a result of the computer being in their home. Further open-ended comments about the program were requested from parents.

Parents believed there was a difference in the child's learning while the computer was in the home. Differences parents observed included increase in interest and time on task, improvement in language and mathematics skills, improved ability to follow directions, development of independent learning skills and work habits. Overall improvement was seen both by elementary and middle school students and often an increase in classroom grades and homework performance.

For the open-ended questions, parents expressed their pleasure participating in the THC program. They expressed the desire to have the computers in the home longer. Several parents noted that they, too, learned about the computer while working with their children. One parent indicated the child was interested in the computer at the beginning, but later had to be reminded to work on it. Another parent suggested a mid-point evaluation/assessment to resolve unanswered questions. An increased number of staff involved in the orientation sessions was suggested.

The suggestion was made that parents alone be involved in a session at the beginning to help them increase their knowledge and understanding of the computer and the child's assignments -- beyond the responsibility factor alone. Appendix B contains a list of all the parent comments separated into elementary and middle school groups for both questions.

Gains in Iowa Tests of Basic Skills Scores

The Take-Home Computer Program enabled selected Chapter I students in [illegible] middle schools and nine elementary schools to have computers and planned assignments in their homes for six weeks during the year.

The experimental group was matched with a control group of Chapter I students from schools similar to the experimental schools. No controls were taken from the experimental schools. One requirement for involvement in the THC program was the willingness of the parent to come to a meeting and agree to work with this child four evenings a week. If the experimental schools were used for the control students, the controls would be Chapter I students whose parents did not agree to come to the meeting. To get beyond this, the control students were chosen by computer from Chapter I classes in 59 schools similar to the experimental schools.

Students in the control and experimental groups were administered the Iowa Tests of Basic Skills (ITBS) during the regular testing program.

The objectives of the THC program were to improve students' reading and mathematics skills. To measure the improvement, the gain in ITBS mean reading and mathematics scores was measured from spring 1989 to spring 1990.

Table 1 provides the mean gain scores for each control school in reading and mathematics. Table 2 provides the mean gain scores for each experimental school in reading and mathematics. It can be seen that the computer chose similar students to the experimental students from a similar pool of students throughout the system.

In Table 3 the mean gain scores in reading are provided. The Total N for the entire reading group (N = 846) is broken done into the sub groups of elementary and middle, control and experimental with the mean gain scores for each group shown. Table 4 provides the same information for the students in mathematics.

TABLE 1
Mean Gains -- Reading and Mathematics
for Control Students in Elementary/Middle Schools

Elementary School	N	Mean Gain Reading	N	Mean Gain Math	Middle School	N	Mean Gain Reading	N	Mean Gain Math
Whitefoord	4	7.25	3	7.33	Southwest	26	8.19	24	1.54
Blalock	13	10.69	13	8.38	Marshall	95	6.85	90	2.67
Boyd	5	0.60	5	11.80	Inman	46	2.17	46	2.04
Carey	7	9.85	9	26.11	Sutton	33	7.60	35	8.02
Cook	1	-10.00	1	31.00	Walden	44	0.38	46	-1.26
Herndon	1	9.00	1	-11.00					
Hill	4	0.50	4	-5.50					
M. A. Jones	1	14.00	1	5.00					
Mitchell	1	-16.00	1	8.00					
Oglethorpe	2	27.50	2	10.00					
Pitts	14	11.28	14	10.42					
Rivers	2	-9.00	2	-13.50					
Towns	3	18.33	3	5.66					
A. D. Williams	5	8.20	4	16.25					

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Gains in Iowa Tests of Basic Skills Scores

The Take-Home Computer Program enabled selected Chapter I students in eight middle schools and nine elementary schools to have computers and planned assignments in their homes for six weeks during the year.

The experimental group was matched with a control group of Chapter I students from schools similar to the experimental schools. No controls were taken from the experimental schools. One requirement for involvement in the THC program was the willingness of the parent to come to a meeting and agree to work with this child four evenings a week. If the experimental schools were used for the control students, the controls would be Chapter I students whose parents did not agree to come to the meeting. To get beyond this, the control students were chosen by computer from Chapter I classes in 59 schools similar to the experimental schools.

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TABLE 2
Mean Gains -- Reading and Mathematics
for Experimental Students in Elementary/Middle Schools

School	N	Reading Mean Gain	N	Mathematics Mean Gain
Elementary				
Anderson Park	14	14.42	13	14.38
Fain	20	5.55	20	11.20
Harwell Road	13	10.23	13	3.15
Bethune	17	-0.70	17	0.64
Carter	18	4.94	18	-1.61
Grove Park	32	5.34	32	7.43
John Hope	25	4.96	26	-1.38
Scott	14	11.00	13	3.84
Woodson	24	12.62	23	8.73
Middle				
Bunche	28	7.14	26	9.23
Parks	15	19.26	15	41.00
Sylvan	35	6.94	33	7.84
Coan	15	2.93	16	3.00
King	27	10.00	27	8.33
Long	58	5.05	55	-1.03
Price	32	7.59	32	4.75
Kennedy	35	8.28	36	7.44

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Table 3
Control and Experimental Schools
ITBS Reading NCE Mean Gain Scores
1989-90

Group	Mean Gain Scores	Standard Deviation	N
Elementary			
Control	9.0111	16.4968	160
Experimental	7.2034	13.5493	177
Middle			
Control	5.0492	16.1489	244
Experimental	7.6428	16.4830	245

Table 4
Control and Experimental Schools
ITBS Mathematics NCE Mean Gain Scores
1989-90

Group	Mean Gain Scores	Standard Deviation	N
Elementary			
Control	5.0492	16.1489	244
Experimental	7.3667	17.1237	240
Middle			
Control	2.4689	13.6351	241
Experimental	7.6408	16.4830	245

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Table 5 provides the Observed and Adjusted Mean Scores for reading and mathematics for the control and experimental groups adjusted for the 1989 NCE mean scores.

Table 5
Mean ITBS NCE Scores
Adjusted by 1989 Mean NCE Scores
Mathematics and Reading

Factor		Observed Mean	Adjusted Mean
Mathematics			
Control	'89	32.38095	32.38095
	'90	34.74206	37.38492
Experimental	'89	30.42063	30.42063
	'90	37.38492	37.38492
Reading			
Control	'89	31.43254	32.43254
	'90	36.32143	36.32143
Experimental	'89	29.63492	29.63492
	'90	37.05952	37.05952

A regression coefficient was computed within the cells to determine if the scores are related. This within cell regression was significant showing it was appropriate to proceed with the multivariate analysis test. Overall there is no significant difference for the total groups in their performance on the variable.

Hotellings multivariate test of significance had an F = 1.08948 with a significance p = .337. There was no significance and no group effect between the two groups -- control and experimental students when the data for elementary and middle schools are combined.

Two statistical tests were performed in order to determine the appropriateness of a MANCOVA with the data. The first was a multivariate within cells regression which needed to be significant for the multivariate test to succeed. It was significant. (Hotellings F approximately 65.02 p < .0001) The second test is conducted in order to determine if the multivariate regression planes are parallel. This test should not be significant (significance indicates convergence) and it was not (F = .887). Thus we can be confident that the MANCOVA used to analyze these data is appropriate.

A test done to determine if the hyper planes of Math NCE '89 scores and Reading NCE '89 scores by group are parallel, indicated there was no significant difference, which means that the two planes can be considered to be parallel. (F for Wilkes Lambda = .28593 p = .887).

In 1989 the Chapter I control students outscored the experimental students, but in 1990 the experimental students improved so much there was no longer a difference between the two groups.

It was decided to look at the data in the factors of elementary and middle school groups to determine significance of gain in scores.

A comparison was made of the elementary school control and experimental groups. A within cells regression showed F = 59.43148 for Wilkes Lambda p = .000. Therefore, the regression was significant within the cells.

A group effect for the elementary school effect approaches significance ($F = 2.97414$ $p = .052$) The multivariate test was not significant, for the control students were still outscoring the experimental students in elementary school.

A univariate ANOVA in Table 6 report indicated $F = 4.49739$ for math NCE scores ($p = .035$) and $F = 4.16825$ for reading NCE ($p = .042$). A multivariate test of significance (Wilkes Lambda) was computed on these data showed $F = 2.47115$ $p = .043$. We find the planes are not parallel which indicates this univariate test was not valid because the hyper planes interact, that is the pre conditions are not met for use of the test as they must be parallel for the analysis to be appropriate.

Table 6
Elementary Schools Univariate F
Mathematics and Reading

Factor	Observed Mean	Adjusted Mean	F	Sig
Math NCE '90	40.11050	40.77984	4.49739	.035
Reading NCE '90	37.87293	38.71528	4.16825	.042

A comparison of mathematics NCE 1990 scores and reading NCE 1990 scores between control and experimental groups reveals no significant differences exist. (Mathematics NCE scores, $F = 2.19$, $p = .14$) (Reading NCE scores, $F = 3.10$, $p = .079$). Thus there is significant difference in the scores without the covariate of the '89 scores for reading and mathematics.

A multivariate analysis of covariance was computed in reading to compare the performance of middle school experimental and control group students on the 1990 ITBS in reading and mathematics. Results indicated that a significant difference existed between the groups ($F = 5.49$, $p = .004$). Univariate F tests revealed a significant difference in mathematics ($F = 10.96$, $p = .001$) but not in reading ($F = 38.11$, $p = .158$) as represented in Table 7.

An examination of ITBS 1989 mathematics NCE and reading NCE scores for experimental and control group students indicated that control group students significantly out performed experimental group students ($F = 4.82$, $p = .029$) in reading but there was no significant difference in mathematics 1989 scores between the groups ($F = .94$, $p = .333$). Thus experimental groups students' scores rose from nonsignificance to significance when compared to the scores of control group students from 1989 to 1990 in mathematics. In reading, students in the experimental group appeared to "catch up" with their control counterparts. Without the use of 1989 ITBS reading and mathematics NCE scores as covariates in the analysis, this improvement would not have been detected.

In order to test the hyper planes a multivariate Wilkes Lambda test of significance, ($F = .66304$, $p = .618$) indicated the hyper planes are parallel and therefore, the analysis was appropriate and accurate.

The two groups have to be similar groups before a statistical comparison can be made. The use of the covariate makes them similar in gains.

Table 7
Middle Schools Univariate F
Mathematics and Reading

Factor	Observed Mean	Adjusted Mean	F	Sig
Math NCE '90	34.74206	34.01585	10.96182	.001
Reading NCE '90	37.38492	38.11113	2.00087	.158

In summary we find a significant gain in NCE scores utilizing Analysis of Covariance with the covariate being the 1989 NCE scores, only in the mathematics for middle school students.

There was not enough gain in NCE scores for the overall experimental students to have significant gain in an appropriate test, in reading or mathematics or for elementary students to have significant gains in reading or mathematics. In fact, the only significant gains were made by middle school students in mathematics, but not in reading.

Observations and Recommendations

The assumption in the THC program is that six weeks work with a computer in the home combined with assigned homework will make a learning difference which can be measured on the mathematics and reading portion of the Iowa Tests of Basic Skills.

After a close scrutiny utilizing analysis of covariance the gain in mathematics for middle school students was a significant gain. No other gains were significant for elementary or middle school age students.

Six weeks in a period of time from September to March is a relatively short time for a difference to be made in the test. The students enjoy the computers, become computer literate and build computer skills for the future. It should be more valuable for the computer to be in the home a minimum of twelve weeks. This of course, given a constant number of computers, would decrease the number of students exposed to the computer at home, but the effect on learning should be increased. If the goal is exposure, six weeks is enough, if the goal is increased learning by students, the time for the computer to be in the home needs to be increased. Overall, parents, teachers and students benefited from the program. It seems worthwhile to engage students with computers in the home for current and future learning skills, but a longer time frame could produce higher gains.

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APPENDICES

APPENDIX A

THC Curriculum Outline and Evaluation Questions

CHAPTER I
TAKE-HOME COMPUTER PROGRAM

Reading Skills Continuum

LEVEL 4, 5, 6, and 7

Context Clues
Synonyms/Antonyms/Homonyms
Homographs (Multiple Meanings)
Prefixes/Suffixes
Root Words
Content Vocabulary
Analogies
Predicting Outcomes/Drawing Conclusions
Recalling Details
Determining Main Idea
Sequencing
Cause and Effect
Fact and Opinion
Compare and Contrast
Read Graphs/Tables/Maps
Punctuation
Capitalization
Usage

Math Skills Continuum

LEVEL 4

Read, Write and Recognize Numerals
Missing Numerals in Sequence
Place Value to 7 Digits
Rounding to 6 Digits
Multiplying 2, 3, 4 by 2-Digits
Multiplying Multiples of 10
Dividing 3, 4 Digits by 1 Digit
Dividing 2, 3 Digits by 2 Digit
Fractional Equivalent/Lowest Terms
Addition of Fractions/Like Denominators
Geometric Terms
Parallel and Perpendicular Lines
Congruent Lines and Figures
Concept of Perimeter
Linear Measure/Weight/Capacity
Determining Averages
Word Problems, All Operations

(OVER)

CHAPTER I
TAKE-HOME COMPUTER PROGRAM

Computer Courseware Lessons

Reading Skills

LEVEL 4, 5, 6, 7

Case 1

Diskette 1	*Context Clues*
Diskette 2	*Synonyms*
Diskette 3	*Antonyms*
Diskette 4	*Homonyms*
Diskette 5	*Homographs*
Diskette 6	*Prefixes*
Diskette 7	*Suffixes*
Diskette 8	*Root Words*
Diskette 9	*Drawing Conclusions*
Diskette 10	*Recalling Details*
Diskette 11	*Main Idea*

Case 2

Diskette 12	*Sequencing*
Diskette 13	*Cause and Effect*
Diskette 14	*Fact and Opinion*
Diskette 15	*Compare and Contrast*
Diskette 16	*Using Reference Skills*
Diskette 17	*Punctuation*
Diskette 18	*Capitalization*
Diskette 19	*Usage A*
Diskette 20	*Usage B*
Diskette 21	*Usage C*

Math Skills

LEVEL 4

Case 1

Diskette 1	*Reading and Writing Numbers - 1*
Diskette 2	*Reading and Writing Numbers - 2*
Diskette 3	*Reading and Writing Numbers - 3*
Diskette 4	*Reading and Writing Numbers - 4*
Diskette 5	*Place Value 1*
Diskette 6	*Place Value 2*
Diskette 7	*Rounding to 6 Digits*
Diskette 8	*Multiplication - Multiples of 10*
Diskette 9	*Multiplication by 2 Digits - 1*
Diskette 10	*Multiplication by 2 Digits - 2*
Diskette 11	*Multiplication by 2 Digits - 3*
Diskette 12	*Division by 1 Digit - 1*
Diskette 13	*Division by 1 Digit - 2*
Diskette 14	*Division by 1 Digit - 3*
Diskette 15	*Division by 1 Digit - 4*

(OVER)

Case 2

Diskette 16	*Division by 2 Digit - 1*
Diskette 17	*Division by 2 Digit - 2*
Diskette 18	*Division by 3 Digit - 1*
Diskette 19	*Division by 3 Digit - 2*
Diskette 20	*Division by 3 Digit - 3*
Diskette 21	*Fractions - 1*
Diskette 22	*Fractions - 2*
Diskette 23	*Adding Fractions - Like Denominators - 1*
Diskette 24	*Adding Fractions - Like Denominators - 2*
Diskette 25	*Geometry and Measurement - 1*
Diskette 26	*Geometry and Measurement - 2*
Diskette 27	*Word Problems - Addition*
Diskette 28	*Word Problems - Subtraction*
Diskette 29	*Word Problems - Multiplication*
Diskette 30	*Word Problems - Division*

LEVEL 5

Case 1

Diskette 1	*Comprehending Numerals to 9-Digits - 1*
Diskette 2	*Comprehending Numerals to 9-Digits - 2*
Diskette 3	*Comprehending Numerals to 9-Digits - 3*
Diskette 4	*Comprehending Numerals to 9-Digits - 4*
Diskette 5	*Comprehending Decimals to Thousandths - 1*
Diskette 6	*Comprehending Decimals to Thousandths - 2*
Diskette 7	*Comprehending Decimals to Thousandths - 3*
Diskette 8	*Comprehending Decimals to Thousandths - 4*
Diskette 9	*Comprehending Decimals to Thousandths - 5*
Diskette 10	*Place Value to 10 Digits - 1*
Diskette 11	*Place Value to 10 Digits - 2*
Diskette 12	*Rounding Numerals to 9 Digits*
Diskette 13	*Comparing Fractions w/Like Denominators - 1*
Diskette 14	*Comparing Fractions w/Like Denominators - 2*

Case 2

Diskette 15	*Fractions/Addition and Subtraction - 1*
Diskette 16	*Fractions/Addition and Subtraction - 2*
Diskette 17	*Fractions/Addition and Subtraction - 3*
Diskette 18	*Fractions/Addition and Subtraction - 4*
Diskette 19	*Fractions/Addition and Subtraction - 5*
Diskette 20	*Decimals/Addition and Subtraction - 1*
Diskette 21	*Decimals/Addition and Subtraction - 2*
Diskette 22	*Angles 1*
Diskette 23	*Angles 2*
Diskette 24	*Angles 3*
Diskette 25	*Angles 4*
Diskette 26	*2-Step Word Problems - 1*
Diskette 27	*2-Step Word Problems - 2*
Diskette 28	*2-Step Word Problems - 3*
Diskette 29	*2-Step Word Problems - 4*

Computer Courseware Lessons Con't.

LEVEL 6

Case 1

Diskette 1	*Concept of Percent - 1*
Diskette 2	*Concept of Percent - 2*
Diskette 3	*Multiplying by 10ths. 100ths. 1000ths*
Diskette 4	*Division by Decimals - 1*
Diskette 5	*Division by Decimals - 2*
Diskette 6	*Division by Decimals - 3*
Diskette 7	*Mixed Decimals/All Operations - 1*
Diskette 8	*Mixed Decimals/All Operations - 2*
Diskette 9	*Mixed Decimals/All Operations - 3*
Diskette 10	*Mixed Decimals/All Operations - 4*

Case 2

Diskette 11	*Percent Operations - 1*
Diskette 12	*Percent Operations - 2*
Diskette 13	*Percent Operations - 3*
Diskette 14	*Percent Operations - 4*
Diskette 15	*Percent Operations - 5*
Diskette 16	*Multistep Word Problems - 1*
Diskette 17	*Multistep Word Problems - 2*
Diskette 18	*Multistep Word Problems - 3*
Diskette 19	*Multistep Word Problems - 4*

LEVEL 7

Case 1

Diskette 1	*Numeration Review*
Diskette 2	*Addition Review*
Diskette 3	*Subtraction Review*
Diskette 4	*Multiplication Review*
Diskette 5	*Division Review*
Diskette 6	*Operations with Fractions*
Diskette 7	*Operations with Decimals*
Diskette 8	*Operations with Percents - 1*
Diskette 9	*Operations with Percents - 2*
Diskette 10	*Problem Solving - Addition*

Case 2

Diskette 11	*Problem Solving - Subtraction*
Diskette 12	*Problem Solving - Multiplication*
Diskette 13	*Problem Solving - Division*
Diskette 14	*Problem Solving - Fractions*
Diskette 15	*Problem Solving - Decimals*
Diskette 16	*Problem Solving - Percents - 1*
Diskette 17	*Problem Solving - Percents - 2*
Diskette 18	*Problem Solving - Percents - 3*
Diskette 19	*Problem Solving - Percents - 4*
Diskette 20	*Problem Solving - Percents - 5*
Diskette 21	*Multistep Problem Solving*
Diskette 22	*Multistep Problem Solving*
Diskette 23	*Rate/Distance/Time*

CHAPTER I
TAKE-HOME COMPUTER PROGRAM
COORDINATORS' INSERVICE

AGENDA

MORNING SESSION

Welcome and Introductions

Objectives

Program Overview

Program Components

Program Operational Sequence

Parent Training Workshop

Open Discussion

AFTERNOON SESSION

THC Parent Training Workshop Simulation

ATLANTA PUBLIC SCHOOLS * JOSTENS LEARNING CORPORATION

TAKE-HOME COMPUTER PROGRAM

Dear Parent,

We're pleased that you have accepted our invitation to take part in the Take-Home Computer Program. We're sure you'll find that, over the course of the next few weeks, participating in the program will be a worthwhile experience for both you and your child.

As you are now aware, one of the major components of the program allows you to take a computer and software home for use with your child. You have just learned how to assemble the computer and have become familiar with how the computer operates.

Prior to borrowing a computer, it's necessary for you to sign the agreement form below assuring us that you're aware of your responsiblities regarding the computer's use.

Thank you for your cooperation.

Sincerely,

_____

I, the undersigned parent, understand that I am responsible for the child's borrowed computer in the following ways:

1. I will see that the computer is used properly in my home.
2. I will follow the correct procedures in assembling the computer.
3. If I experience any problems with the computer equipment, I will notify the school and explain what I think is wrong with the system.
4. If the computer or any of its accompanying components are stolen, I will notify the police and submit the resulting police report to the school.

Monitor Serial No.	Disk Drive Serial No.	Keyboard Serial No.

Parent's Signature	Date
Program Supervisor	Date

Level

STUDENT'S NAME:______________________________

Journal Pages

Date:	Type of Activity:	Time Spent:	Score:	Rating:

Level

STUDENT'S NAME:______________________________

Journal Pages

Date:	Type of Activity:	Time Spent:	Score:	Rating:

INTER-DEPARTMENTAL CORRESPONDENCE
Board of Education
City of Atlanta

May 24, 1990

TO: Chapter I Contact Teachers
Take-Home Computer Program Schools

FROM: Lowrie A. Fraser, Ph.D. Lowrie
Research Assistant

RE: Parent Questionnaire

As part of the evaluation of the Take-Home Computer Program, information concerning parent participation is needed from parents.

Your assistance is needed in distributing and collecting a questionnaire to the parents of students who participated in both rotation of the Take-Home Computers First Semester and the First Rotation Second Semester. A list of those students, as identified by Jostens is enclosed.

Will you please send one of the enclosed letters home with each of the students for the parent to complete, and collect them upon return?

Please send them home May 29 and return the completed questionnaires to me by school mail on May 31.

Thank you.

LAF:lp

Enclosures

xc: Dr. J. Jerome Harris
Dr. Myrtice M. Taylor
Area Superintendents
Dr. Lester W. Butts
Dr. Barbara I. Whitaker
Mrs. Ethel Blayton

Approved: LHayes-Wallace
LaMarian Hayes-Wallace, Research Associate
Department of Research and Evaluation

ATLANTA PUBLIC SCHOOLS

Department of Research and Evaluation
210 Pryor Street, S.W.
Atlanta, Georgia 30335

May 23, 1990

Dear Parents of Take-Home Computer Students:

Your child participated in the Take-Home Computer Program earlier this year. As a part of our evaluation of this program, we need some information. Please answer the questions below and return the questionnaire with your child to the Chapter I teacher tomorrow. Your help and time are appreciated.

1. Before the Take-Home Computer Program, approximately how many minutes did you spend working with your child on homework each Monday through Thursday evening? _____

2. Now that the computer is gone, approximately how many minutes do you spend working with your child on homework each Monday through Thursday evening? _____

3. What differences do you see in your child's learning as a result of the computer being in your home?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(Over)

APPENDIX B

Parental Responses to Evaluation Questions 3 and 4

Responses to Parent Questionnaire -- Question 3
Elementary Schools

3. What differences do you see in your child's learning as a result of the computer being in your home?

He's able to work faster than before. I think that his comprehension and thought process level was upgraded.

Truly, there has been a great difference.: (1) She's more eager to do her homework. (2) Spending more time reading that Great! The computer home program really has been a success with her. We enjoyed it very much together.

I think he did good working with the computer.

His eagerness to do his homework as a result of the computer, seemingly making it easier for him to understand. It was a challenge, making him read, think and try to beat the computer and get them all right. It was fun for me, and for him. Every home should have one.

Greater incentive, more motivation of self, better spirited, and overall increased attentiveness.

April's thinking is more objective and organized. She is using a dictionary more working on improving her reading skills.

She can learn more fast now. She has learned from him. She is smarter.

They understand more about math. His English has improved.

I see a big difference especially in math and spelling.

Greater interest in his study habits as well as a deeper and greater interest to learn.

Leonard seems to face his work head on now. He goes at it and gets the job done. It is like he is doing a step by step system now. Leonard became an organized person.

I watching my children do homework I notice it is hard for them to work a period of time before they get bored. It seems to me the computer puts them into that one on one pace with their book, paper and pencil, the attention mode has been set.

Before he started working on the computer at home his math grades were low. After the home computer his math grades had improved and he seem to understand a little better.

Her speediness in her reading and also her ability to comprehend more quickly and correctly. Minor typing skills that might well help in years to come.

James' reading and math have improved 75 percent.

Dramane learned a lot. He tries harder and does his work better and I hope he can try this again.

My child is reading better and he's also doing much better in math. It has helped to improve his study habits.

She learned a lot about her math and she learned all about sentences, about nouns and verbs and how to use them. When learn a lots about all of classes and she really learned how to work the computer and how to take care of it. Because I wanted her to take care of it as if it was her own.

No comment, it's nice.

Not any because he didn't want to learn on the computer.

Learning to work a computer and help more math.

Doing much better; have improved

It helped to better his skills in a lots of areas. It helped him in completing his assignments. It helped him in operating other computers and it also helped him improve his thinking skills.

I see that he is comprehending fast. I also see that he can add, subtract, multiply and divide fast.

During the time we had a computer in our home, my child was more eager and apt to take the initiative to do his homework and studying on his own. He retained information quicker than if we did not have the computer. Personally, I feel that the addition of a home computer, enables a child to learn more on his own and provides value computer knowledge and skills.

Very good.

At first he got his work, after so long, it was just here for a day or two before it was used again.

I see a lots of differences in my child's learning. As a result computer being in my home.

She understand her homework better.

I think Yvette is smarter and more wiser than before.

After the computer my child could follow directions and complete tasks independently of me. She worked longer.

His learning is more organized; he spends more time with home assignment.

There is a difference in her learning time. she spends more time with her work.

As a result of computer, my child is able to give more attention to his homework. He is now more interested.

My child learning more because of the help you get from the computer on fractions in math and predicting outcomes in reading.

Yes, the computer helped with reading skills and math problems.

My child"s interest in her homework was greater.

The computer made his school work fun. He enjoyed doing his work.

My child is able to complete his work alone more so now. Work is becoming fun.

She went to bed earlier after the computer program. The computer kept my child up longer at night.

As a result of the computer, he began to do more math homework. The computer made reading and math more interesting and enjoyable.

The computer helped my child become an independent worker. And could complete her work alone.

As a result of the computer, Edward is more interested in his homework. he does most of his homework.

Study habits are better as a result.

Yes, my child could spell a little better. She could divide a little better.

As a result of the computer, it became a rule in our house that I spend an additional thirty minutes talking about the homework just completed.

As a result of the computer program, my child has improved in reading and math.

Yes, it helped her to understand much more better.

I've seen about a 30% change in work habits when it was no percent at all.

I see very little differences. Kelli always spends 30 or 40 minutes with her homework. There are very few times that she needs me to help her.

Her grades have improved.

He enjoyed and seemed to work better from the computer. For example, the reading math problems were not hard for him to understand that he did reading from the book.

None

Sixty to ninety minutes when needed. We spent most of our time on weekends, working together.

Some improvement

A great improvement

He has improved.

The computer really helped.

Not a lot

Some days I work with him for an hour. Antoin is getting better grades in school.

A greater interest

A great concern and eagerness to earn.

As long as the computer was there she worked longer and harder. Her homework was always completed.

Much improvement

She's learning more now.

I can see some improvement.

Much improving. We bought her one after that.

A short interest.

1. She is excited about her homework.
2. She understands what she reads better.
3. Her spelling has improved.
4. She is working harder to get her math correct.

Increased reading skills

My child has learned a lot from the computer since she had for these six weeks. I am glad that she has improved on her math.

My child goes right to work with the homework without he ask or told to get his work done.

Terrence was interested in working on the computer doing his math.

You learn faster, more exciting for her and her self. And I really do appreciate the Home Computer program.

Very little differences.

Responses to Parent Questionnaire -- Question 3
Middle Schools

3. **What differences do you see in your child's learning as a result of the computer being in your home?**

She's doing better than before. The computer helps her a lot. I wish I was able to afford one.

Her reading improved and her math improved very much and she learning how to use a computer very well. She learn the keys very well and how to keep her hands on the key board without pecking at the keys. Thank you for the use of the computer. Hope you can help me again. Thank you.

He understands some of his daily work better now than before.

She seems to take her time in during [doing] her lessons. She has a better understanding of her assignments. She also learned some computer skills.

Before my child got her computer she was doing very well, but after she had the Take-Home Computer Program she started doing much better. I see a lot of difference in her learning. I think that she is doing excellent learning.

Improving her spelling skills. She loves to spend time with her studies. She loves to read her assignments and do them. She seems to invest a lot of time in mathematics.

It was a big change in his work habits. We did not keep the computer so he could advance his learning. he kept the computer for the first time the full time.

She's quicker to caught on and she comprehends what she reads much better.

Gregory's reading and vocabulary have improved. He also improved in math as well.

First of all it helped me to find where my child needed the most help. Also with the computer you had to spell your answer in, and this gave more time to sink in. I also see my child taking his time and getting an understanding.

Anthony learned to be more independent as far as doing his homework. With the computer it helped him master the skill in the subject.

Work better alone

An improvement. Not enough time with computer allowed in the home.

Being able to operate a typewriter, being more computer literacy, studies longer. Having the computer in the home was very educational.

Learned how to follow directions. She became more independent with her studies. Doesn't need as much time to complete homework assignments.

With the computer Leslie spend one hour working on it each day even when the computer is gone when don't have any homework. Most of the time I have to work at night.

His grades picked up.

Sean has been able to work independently only stopping to ask questions instead of me having to sit with him throughout the homework assignment. He has developed self confidence and gained a better understanding regarding his work habits and ability to read to get his assignments done. I feel the Take-Home Computer Program is very good. If offered again, I would like to one more participate.

It's much better for my child that have take home computer, and it help my child to become better in learning English.

A whole lots with difference subjects. It is big help.

They spend a lots of time on computer. It draws their interest into spelling, math, English, We need the computer.

The computer was a excellent experience for my daughter. It helped her to become self motivated. She enjoyed the challenge of doing her homework without assistance. I would like to thank Sylvan Middle School for giving her the opportunity to participate in the Take-Home Computer Program. Please continue the program and I hope that Nyeshia will be able to participate again.

My child seems more interested in math and is making better grades in math.

To be honest his learning remained almost the same. He has improved in recent months because of other factors. I cannot say that having the computer was a direct contribution but it did help.

There is more understanding of what to do and he was doing more and understanding the teacher.

About the same, perhaps a bit better

As far as the reading comprehension he has improved. He is still having a little difficulty in math.

Better attention span, greater enthusiasm for studying, an increase in mental concentration and a love for computer training.

My child seems to be faster in comprehending most of his subjects.

(1) A more frequent self starting attitude (2) more requests for assistance (3) Seemingly a better understanding (4) A more positive attitude (5) He requests to have his own computer at home and/or reacquisition of one next year or soon.

Doesn't take as long, more correct answers

First of all the computer was big success in our home and we really enjoyed having it. With the computer, she studied more, her work habits were much better.

She is approving better.

She made progress.

Smarter and understand things better.

She does her homework quicker with the computer when it was in the house. She learns more.

A lot more improvement, before the computer came into our home, my child didn't really know how to do fractions but now she knows how to do it.

They enjoyed it so much that I bought one for my house. Because before I brought the computer home I was having trouble getting my sons to do any kind of work. After bringing the computer home they were very eager to finish everything just so that they may work on that.

Well she learn about the computer itself. And how to use one. She thought it was fun to use. And fell it helped her a lot and hope she will use it again.

I think Keisha improve since her had the computer for the time she did and everyday she would get on it and work without me telling or asking her to.

She does better on her homework.

My child improved on his homework.

My child has improved a lot on the spring test.

My child seemed more interested in learning.

My child spends more time on homework.

He does much better.

My child seems more interested in homework.

My child does more work at home to study more on her class work.

He did spend a lot of time doing his homework.

My child learned a lot out of the Take-Home Computer. She put commas in the correct places and also learned a whole lot of math.

My child learn how to divide and other things on the computers. On reading she learned how you work in different ways.

She can learn more by the computer.

I see good results in my child's learning.

She knows a lot more than she did when the computer enter in our home. She is very wise now and she have learned a lot of skills and she is improving in her skills.

I like it a lot because he learned a lot of information. I like the computer because it was good for skills he didn't understand.

I was thinking about buying Tracey a computer because the computer solve all my problems and her problems. It really help her through school. It help me read and write. I really like the games because they give me the scores that I make. I really like the Take-Home Computer. Thank you a lot.

I have seen a lot of difference in my child's grades, there improving and he isn't getting much phone calls from his teacher like he used to.

She is more interested in her studies and she does her work until she gets it correct. And now she does not give up very easily.

When she had the computer she stopped going outside and she being getting good grades in school and she be on the computer ever day of the week and she just love doing math on the computer and she stop being bad in her class work. On that computer she got good and better.

Grades improve.

Better learning and getting skills having fun learning math and reading at the same time.

She stay at home all the time. I don't have to worry about look for her for she stay on the computer all day. She also know how to divide decimals.

Marcus never sits down long enough to understand or complete his work. With the computer we had to sit down together to work. The computer made him pay more attention to the directions and follow them.

I learned a lot more than I was learning. It helped me a lot. I know a lot more now.

She improved a lot on the spring tests and has improve in her grades.

I don't have to remind my child to do homework.

My child does homework on her own.

My child did well on the spring test.

My child has more interest in homework.

My child seems more interested in homework.

Now she understands much of her work than usual.

She doesn't come home bugging me when I'm in the kitchen cooking.

My child spends more time on homework.

My child spends more on homework.

He has made a big difference in his learning abilities, his reading and math is much better and even his test scores is better. Thanks to the computer itself is a very learning instrument that makes learning a lot of fun.

Better math skills.

She reads more, comprehends more.

He studies more.

Reads more.

Melvin reads more now.

I have better understanding of things I didn't know and it really help me a lot.

She spends more time studying now.

Marco can now work much better alone. His understanding of directions given for his assignments have improved greatly.

She learns more.

She improved greatly.

He shows more interest in his studies and his knowledge of computer increased.

I don't see nothing about it because I think it is a nice thing to do.

Improved test scores, improved study habits

She can see fun in learning.
I think that she have learn more since the computer has been in our home. Also now that since the computer has been in our home she has been studying long in her homework.

A great difference in study. Start working on computer time she get in. I didn't say do your homework. After I had to tell her to get your homework.

That he has improve in his reading and math skills

Improved test scores

Likes homework better

The changes in the take home computer was in my house. That my child have increase my child's learning.

It helped Santories to remember his math skills. It helped me to practice do home work at a regular time.

It help Walter to do his work and he improved and it make me feel good.

His attitude change. He figures he had to do better because he knew he was lacking something. His attention span is very short. and the computer really help him to continue on when he would have been writing something down and all he had to do was push buttons.

I see that my child has an easier time learning her skills. My child Crystal has liked the computer being at home.

It making him real interested in doing homework and it made him study more.

Fiums's skills are better than before she had the computer.

He really likes to do math now.

He learn a lot about math and reading, and the kids enjoy it.

Learn faster on it. She study more harder.

Have a special time to study and it brought us closer together.

Elementary School Parent Responses to Question 4
Comments

It is a very good program for my child. It is the best school program that I have heard of.

I will like for her to use it again.

It was very educated and he really did enjoy working with it.

It was fun, for and for him. Every home should have one. Although the lessons should be more complicated something to really challenge them (their minds).

Keep it up, it's great.

The computer program should have a more standard list of objective to reach each week to be turned in and discussed with each parent as to the effectiveness of progress.

We all really enjoyed the computer it was a lot of fun for the whole family after being out of school so long I found that a lot of things I had forgotten so the computer help me a lot to.

I think the Take-Home Program is a good one, and hope it improves.

It was great!

The Take-Home Computer was a wonderful ideal. It's a shame that the whole student body could not be exposed to its usefulness. This is a program that could benefit all students. It could be every effective in the classroom on a daily basis. I wish the City of Atlanta and the Board of Education could find the funds to have this program in every public elementary school to enable students to progress at a faster pace for the futu.e

I do hope this program will continue and maybe produce and invitation to keep computers much longer. Very productive.

Our family was very happy to be included in the program. It was a lot of fun and very educational asset to us. (Hope to get the chance again.)
A fun way for both parent and child to work together.

I wish more computers were available so the children could keep them longer and develop more skills.

I wish James and the other students could have kept the computer for at least another six to eight weeks. But for the length of time he had I could see an improvement in his reading and math work. Thanks for allowing him and the other students to have the experience on the computer.

It is good for a better attraction on homework. A fun way for both parent and child to work together.

The computer is a very Big Help in learning on this equipment. And it gives a child to get themselves ready for the future. Because me myself went to school for computer and I learn a lot about a computer and what it can do and you can learn so much. I am very happy that my child enjoyed and hope that others.

This is a wonderful opportunity for students to improve their reading and math skills. As a parent, I have enjoyed working with my child, and realized the importance of parent support. I hope Carter children will get this program next year.

The Take-Home Computer Program can help all children that wants to learn. It helps them w.th their work. It is a good program for children.

I enjoyed it very much. It was good for the kids that were having problem with their work. Thanks for giving my child a chance.

The computer programs I think it was the best program that I have every seen in any school that really work at least with my child it did. Thanks for letting my child be in it.

I think the Take-Home Computer Program, is very interesting and very helpful. It is a easy way for children to learn.

Keep the good work up for other kids and it helps.

Please continue to use this program it is very helpful. Thank you very much. We have enjoyed the computer.
I think that it is very good program, and it help my child in her lesson in school.

I myself think the program help the children that are slow in doing there work. I wish it to continue.

We work together. I enjoyed the computer. We learn a lot.

Please let the computers come back next year. The computer was a wiz for words and sentences.

Yes, would child selected certain tape and worked with it over and over. Next time she may do the entire disks. Next year.

Please bring the program back. The computer was a big plus. It did help.

Yes, please bring the computer back next year. She is waiting for new disks.

Please let us have the computer program another year. Let one or some computers stay in the classroom.

Yes, the program was fun for my child. The opportunity for her to have a computer at home was great for her and her brothers and sisters.

Would like to see that the program is kept for next school year.

Please continue program. It was a good thing.

Yes, so my child could learn and enjoy some of disks.

Yes, because my child was interested in materials you sent home.

Yes, please bring the program back to help reenforce the learning.

Yes, the computer program made learning fun. It was fun to learn with the computer.

Please keep the computer program.

Yes, I would like to have this program next year. This may help him with his grade.

I would like to see the computer again next year. And maybe a little longer.
I wish that it could be more of the "Take-Home Computer" at lease about once or twice every six months. Its a wonderful product.

Please let the computer program come back. Let the children keep the computer longer and please let the children have a computer in the classroom. Thank you very much for computers in Chapter I.

Please bring the computer program back. It reinforced and changed the learning process.

Keep longer than 5 weeks.

Would like this as a part of the school program each year.

A good program.

Keep the program for next year.

The Take-Home Computer was a good project. My children and I learned from each other. We need more programs such as this.

Keep longer.

Need to keep longer.

He learn to work on the computer at school. I like what the computer have done for my sons.

I like the computer. My child like the computer a lot. We need it again next year.

I would like to buy Marvin a computer of his own.

Need to keep longer.

Keep longer.

Need to keep longer.

We need more time with the computer in the Home. Frenchlyn's mostly worked alone. However her teacher wrote me a note. I wrote her a letter to thank her.
I really think it was nice letting us use it to help her.

We really did enjoy your T'ake-Home Computer Program.

When Kelli first got the computer it was interesting to her, then she had to be reminded by me to work with it later.

Middle School Parent Responses to Question 4
Comments

It's a great program. Keep it up.

We enjoyed having the computer at home.

I do think this is an excellent program. I am sure my son and his brothers and sisters did benefit. I would encourage the continuation of this program and other like it.

The computer program would give a child that add extra that they need. At the same time they would learn more about the use of computer in every day life, which enable them function in a modern society.

The program should be experience by all the students who request it. It was a great learning experience for me as well. We studied hard every day on the computer and I feel like it will open doors for both students and parents.

We enjoyed the Take-Home Computer Program as an enhancer for Aneesah and super teaching aid, which in my opinion greatly helped her.

I feel that the Take-Home Computer Program should be given on a quarter basis. Because it is so important that children, who otherwise do not have the luxury of a computer can have access.

(1) The computer program should be expanded-more time, more computers, etc.

(2) The institution of an evaluation/assessment at the midpoint. This could resolve occurring questions, highlight positive experiences, in other words, enhance the experience before it terminates.

(3) An increase in the number of staff involved in the orientation sessions.

(4) An orientation session on the front end with parents only, to increase parents understanding and involvement beyond the obvious obligation of being just responsible.

I don't know if it is an ongoing thing. If it is not, it should be.

I would like to have it again because it helps him study harder.
It is fun and you can learn more skill on it and it help him to learn more.

I do believe it should be more computer Program. Maybe to continue on through the whole year. it's a very important program. Thanks again for giving my child a chance.

This is a very effective program for the Atlanta Public Schools.

I would like to take another computer home because I like working on it.

It was fun. I would like to have it again.

We would like to get it again. It was fun learning with it.

I wish the computer was free because they learn a lot from it and the kids miss it a lot.

There "nice" to have. It will be great to have them back, for school use.

The Take-Home Computer were the best thing for her. She was very impress with the computer and I were to. We had lots of fun with the computer. The best disk were the Math and the Reading were to I refreshing my math to an reading. Thank you very much.

I think it is a wonderful program and I enjoyed it very much and so did my child. I think he would like to be in the program again.

The Take-Home Computer Program is one of the best programs I have ever known. Every family should be able to complete this assignment. It not only helps the students, but also the parents.

The Take-Home Computer Program has made a lot of difference into my child's life which really makes me happy. I think children should have more computers because computers helps them learn in a better and faster way.

We would certainly like to see this Take-Home Computer Program be done quarterly with students so as to help us evaluate the intent of the child's interest. Just once a year offers us a foundation understanding of what the child seems to be interested in. He kept the computer for the full time he was suppose to for the first time. He had never operated a computer before. It was fun.

It's a good program that I would recommend be continued.

Me and Gregory enjoy the Take-Home Computer because it help me and Gregory to learn from one another.

I will like to thank all concern and had input in the Take-Home Computer. I think this is a good teaching tool.

Each student should have one computer in their home. I will try and get one for the kids.

I think it is a good program and should continue.

Hopefully, the computer can be use by the parents and students year-round.

I really enjoyed having the experience of having the computer in my home.

The computer was very very good. I going to try too get my children one.

The computer program I would advise each parent to help there child every day with computer. Books, homework, do insure there child its best to have knowledge. I haven't been helping my child the way I should but that's going to change. I can see the difference in my child's work habits.

The Take-Home computer was a great ideal. I have even learned a little about computers and I can't even read. so after buying my own computer and a book for operating a computer, my kids now enjoy teaching me what they read. Thank you.

I think it was a very good ideal to let the children take it home to use it to learn about how it work. It was a very good ideal to use it.

We enjoyed working with the computer very much would love to purchase Keisha one in the future.

I wish my daughter could keep year round. I miss the time me and my child shared together with the computer at home.
I just love that Take-Home Computer Program because Roberta got a good grade on the computer. I want her to take a bought computer home so she can get better and better grade in the 8th grade.

The computer is a greatest thing I have use in a long time. Sometime I still wish I had it.

I like the program for my child.

I would like for her to have the computer again. I just might buy her one.

I would like for my child to be able to take a computer home in the future.

I thought it was a good program. It help a lot.

I think it would help more if the computer stayed longer in the home.

I think it would help more if the computer stay longer in the home. (again)

I would like to see more children with computers in the school

I think the children should keep the computer longer.

I wish she can take one home today she really engaged the computer as well as I did she really love it. She improve in much of her work and would like to say thank you very much.

I think it would help more if the computers stayed longer in the home.

I would like to see more computers in the school.

The Take-Home Computer was a asset to my home. I don't know who learn the most the children or the adult. I really enjoyed the computer.

A very good program. It really gets the whole family involved in doing homework.

It kind of boring. But it taught me enough.

My child loved the program.

A worthwhile program.
Thank you. She loved it.

I would like to do it again.

We enjoyed having the computer in our home. We would love to have it again next year.

We hope to have the program again next year.

We love the program.

It 's a great program.

We appreciate the opportunity.

I think he would like the Take-Home Computer again.

It is helpful to parents and children. We want to use it again.

I think that it was a good program and I enjoyed the computer.

We enjoyed it and would like to use it again.

I like to read the mystery and solve the problems in math.

I like it and will like to use it again.

I even enjoyed working on the computer. It was a real challenge. This program should be offered to the students more often. Thanks, for allowing my child to participate. A lot more improvement, before the computer came into our home. My child didn't really know how to do factions but now she know how to do it.

It would be nice for Samantha had the computer in her home again. Different kind of disks.

I think the computer program is great because she can get use to the computer learn the keys and what they mean.

I would like to have it in our house again.

Computers help children, if it wasn't for computers the children wouldn't be helped. I think they should keep the program because it helped my child a lot.

I think that it should stay in the home longer.

Keeping the computer for a long time.

I think the students should keep the computers longer.

My child has improved in her grades.

Well I think that she learned more work she understand her math a little bit more.

I would like for him to keep the compute for a longer time. I like working with him on the computer. If hope he will be able to have one next year in the high school.

I enjoyed working with my child. With the compute. She enjoyed it too. I think she will like to have it again and I will like her to have it at least over the summer because of the computer she learned more than she learn in school and she understand it.

I really enjoyed working with my child with the computer and I hope she keep it for the whole summer until they go back to school.

I enjoyed the Take-Home Computer Program.

You need to keep to Home Computer in the school.

It was a good learn program for the children. It helps them to learn new things and to improve in their learn skills.

I would like to have it again because there are some skills he needs to cover. I think the students should keep the computer longer, because if they work on it every day they should be and "A" or "B" student.

I would like to see more computer in this school for teacher and students. I would like to keep the computer longer next time.

I wish that would be extended time instead of five weeks.

I think the program was a great experience for me and my child.